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The Flood in Iran: A Consequence of the Global Warming?

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Figure 1: Land subsidence in a road, Fars province, southern Iran

Global warming is perhaps the most dangerous environmental obstacle the world currently facing with. It has crept into our lives. From mid- to late-20th century, we have witnessed enormous changes in the frequencies of natural disasters throughout the globe—droughts, floods, storms, heat waves, to name only a few.^{1,2}

Global warming has resulted in variable patterns in rainfall causing flood or drought from place to place. It affects the water cycle with consequent more severe and frequent extreme weather disasters such as droughts, floods, tropical cyclone and tsunami activity, tectonic and volcanic activity, and famine.³ Drought, flood and extreme temperature significantly affect

the economy and decrease the agricultural product and global food supplies by about 10%.^{1,4}

Recently, we have had unbelievably high incidents of unexpectedly devastating typhoons in various parts of the world. Example is the huge blizzard in spring in the USA.⁵ Another example is the heavy seasonal rains and flood that struck several governorates of Iraq, Iran, and Afghanistan in late March and early April, leaving behind several dead bodies and destroying several cities and hundreds of villages. According to the *Guardian* “Afghanistan has been hit with the worst flooding in seven years, with 20 dead, thousands of homes swept away and many families, already displaced by drought, forced to leave their homes for the second time.”⁶ In central and northern governorates of Iraq, heavy rain over 10 days caused flooding and damage; Tigris river overflowed down to adjacent areas in Iran.⁷

Many parts of Iran have also been affected. Because of the climatic changes, Iran has suffered drought since almost 30 years ago. This prolonged drought has changed many ecosystems in Iran. Many lakes and rivers have dried up. People have moved and settled in lands where once used to be the river banks and beds. Parts of jungles have disappeared and lands subsided (Fig 1). All these resulted in a catastrophe.

Recently, a devastating flood struck parts of Iran (Fig 2). Almost all provinces had heavy rain falls. The ground, which

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had not been protected by trees and bushes, was washed away by heavy rain; mud flowed into residential places, cities and villages. Massive destruction of infrastructures, home, agricultural land, and animal husbandry was just a small part of what happened in the country; roads were closed causing trouble to help the needed people. According to a Red Cross report “Heavy rains and flash floods have affected more than 2000 cities and towns across almost all of Iran's 31 provinces, according to the Iranian Red Crescent. An estimated 10 million people have been affected in some way, including more than half a million have been displaced from their homes—some permanently. At least 78 people have been killed and more than 1136 injured.”⁸

During the acute phase of such a catastrophe, people mostly suffer from loss of their family members, home, farms, facilities, invasion of rodent to the city, etc. At the time of injury, they need medical attention, food, water and temporary shelters. Nonetheless, the most important problem for these homeless people is severe physical and psychological trauma they had experienced. After termination of the disaster, all of those who came for help return home, leaving behind a group of victims still in desperate need of help, even more than before. Gradually, starvation and malnutrition begin to surface. Starvation, unemployment, and low sanitary measures make them prone to serious medical conditions such as infection, particularly zoonotic and chronic diseases. The victims are threatened by not only physical illness but also mental ailments caused by the crisis. Many of them find them to have no choice but to immigrate to another place, putting them at risk of solastalgia with increasing psychological distress.⁹

Economic crisis is another problem after a disaster. The recent flood struck Iran destroyed thousands of kilometers of



Figure 2: Devastating flood in Shiraz, southern Iran

roads, numerous homes and infrastructural facilities costing at least US\$ 8 billion. Worse, for the imposed US sanctions on Iran, the financial aids provided by other countries and international bodies could not reach Iran, although according to the US officials, the sanctions are not supposed to affect the health of people.¹⁰

Invasion of southern parts of Iran by a swarm of desert locusts (*Schistocerca gregaria*) soon after the flood, was another major problem.¹¹ After the flood and increase in humidity, a swarm of locusts immigrated from Saudi Arabia and Kuwait

to Iran. They were able to eat the remaining agricultural products the flood could have not destroyed. The large amount of locusts now available as food to ravens and certain types of wolves, would increase the number of these animals, causing another shock to the local ecosystem and consequent environmental problems.¹²

In many affected areas with hot climate, people can no longer stay in tents provided by the Iranian Red Crescent. For the presence of water all over the area, the place is an ideal environment for proliferation of insects. Therefore, enough protection by using fly nets, for example, should be used, or we will witness an increase in the frequency of diseases such as malaria and leishmaniasis.

The global warming is a reality. Some politicians believe that working for prevention of global warming is a waste of time and resources. If we are going to ignore these alarming signs of the global warming, we should at least prepare for facing similar (if not worse) catastrophic events in forthcoming years.

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